

Kramer Electronics, Ltd.



USER MANUAL

Model:

PS-1FW

DV Interface /PSU

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 500-plus different models now appear in 8 Groups¹, which are clearly defined by function.

Congratulations on purchasing your **PS-1FW DV Interface / PSU**, which is ideal for connecting a device with a 6-pin FireWire connector (such as a camera or an external hard disk) to the 4-pin FireWire connector on a laptop while powering it.

The package includes the following items:

- **PS-1FW DV Interface / PSU**
- Power adapter (12V DC Input)
- One 4-pin to 4-pin short cable
- This user manual²

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high resolution cables³

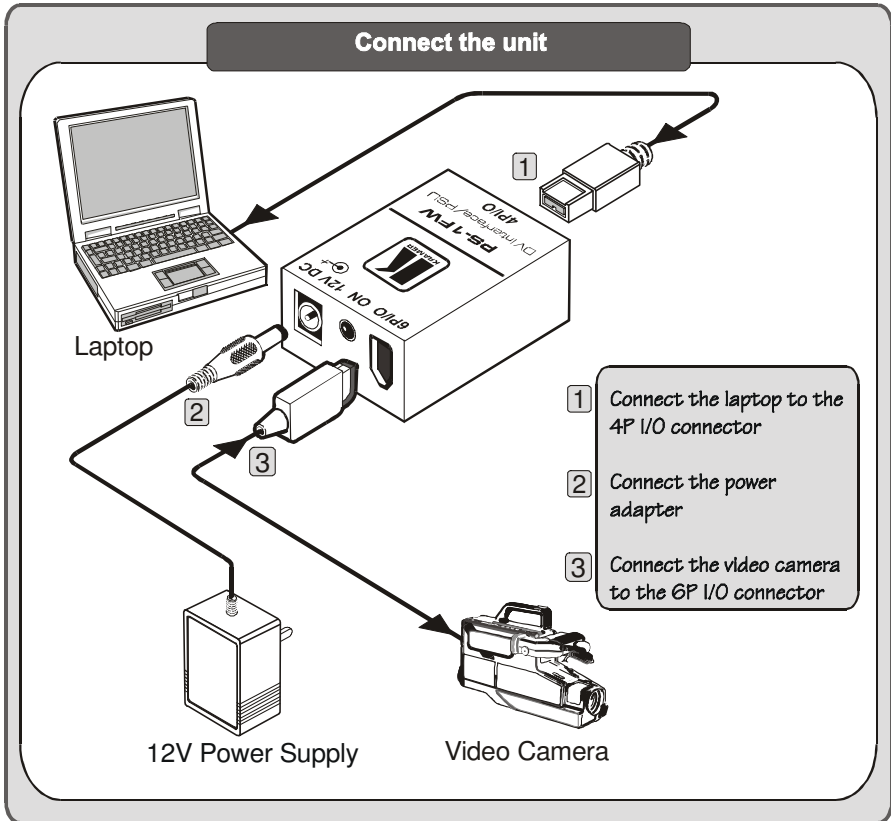
1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from our Web site: <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.



3 Overview

The **PS-1FW** interfaces between two devices with FireWire connectors such as a laptop, for example, on one side and a camera (or external hard disk) on the other side, via 4-pin and 6-pin connectors respectively.

The **PS-1FW** routes the data between the 4-pin connector and the appropriate pins on the 6-pin connector, while supplying power to the remaining two pins on the 6-pin connector to power the connected device.

The Kramer **PS-1FW**:

- Offers a simple-to-connect configuration that operates bi-directionally
- Can be operated with FireWire™/i.Link™ implementation of the IEEE 1394-1995 and the IEEE 1394A standards at data rates of up to 400Mbps/sec
- Supports hot insertion and removal, as well as all the features of the 1394/FireWire interface
- Can source the power to the device connected via the 6-pin connector
- Includes a LED display indicating power to the unit

This section describes:

- Understanding FireWire (see section 3.1)
- FireWire Compliance (see section 3.2)
- Recommendations for achieving the best performance (see section 3.3)

3.1 Understanding FireWire

FireWire is a serial bus standard that enables quick universal interfacing between video and computer hardware items. FireWire is simple to use and operates independently of the host system. In addition, FireWire supports Plug and Play¹ and hot swapping².

Many computers today come with one or more FireWire ports on the rear panel. These ports let you attach many devices to your computer quickly and easily. The operating system also supports FireWire, so the installation of the device drivers is also quick and easy. Compared to other ways of connecting devices to your computer (including parallel ports, serial ports and special cards that you install inside the computer's case), FireWire devices are simple. Many peripheral devices (including: DV Camcorders, Digital still cameras, Storage devices such as External Hard Drives and Arrays, and Network connections) now come in a FireWire version.

¹ Configures automatically without any driver. Whenever a device is added or removed the 1394 bus re-enumerates.

² You can connect and disconnect inputs and outputs dynamically, without having to restart the PC or cycle power

3.2 FireWire Compliance

The **PS-1FW**:

- Fully supports the provisions of the IEEE 1394-1995 Standard for High Performance Serial Bus and the P1394a Supplement
- Is fully interoperable with FireWire™ and i.LINK™ implementation of IEEE Std 1394
- Is fully compliant with Open HCI requirements
- Provides P1394a Fully Compliant Cable Ports at 100/200/400 Megabits per Second (Mbps/s)
- Includes full P1394a support, that is, Connection Debounce, Arbitrated Short Reset, Multispeed Concatenation, Arbitration Acceleration, Fly-By Concatenation, Port Disable/Suspend/Resume
- Includes Extended Resume Signaling for Compatibility with Legacy DV Devices
- Includes built-in protection from electrostatic discharge (ESD)¹, by suppressing all transient high voltages down to the allowed level. In particular, ESD protection for high-speed data lines to IEC 61000-4-2 (ESD) 15kV (air), 8kV (contact), IEC 61000-4-5 (Lightning) 12A (8/20us), and IEC 61000-4-4 (EFT) 40A (5/50ns)

3.3 Recommendations for Achieving the Best Performance

To achieve the best performance:

- Connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer **PS-1FW** away from moisture, excessive sunlight and dust



Caution – No operator-serviceable parts inside unit.

Warning – Use only the Kramer Electronics input power wall adapter that is provided with this unit².

Warning – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

¹ When connecting a "live" DV source to a receptor, an electrical potential difference or any other element creating a high voltage (such as ESD or a live chassis) may permanently damage one or both of the connected devices. This high voltage may be seen as a spark occurring at the instant of connection, or may not be seen at all, but nevertheless can result in costly damage

² For example: model number AD2512C, part number 2535-000251

4 Your PS-1FW DV Interface / PSU

Figure 1 and Table 1 define the **PS-1FW DV Interface / PSU**:

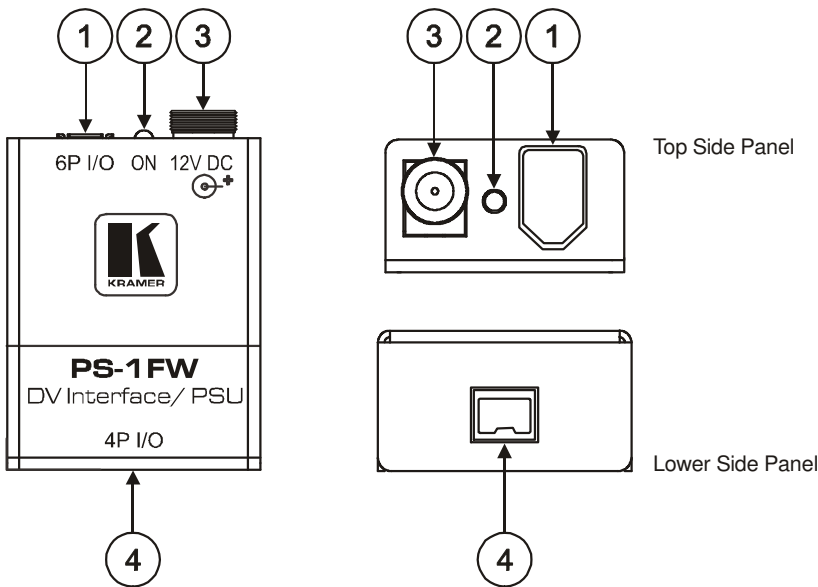


Figure 1: PS-1FW DV Interface / PSU

Table 1: PS-1FW DV Interface / PSU Features

#	Feature	Function
1	6P I/O 6-pin FireWire Connector	Connects to the FireWire device
2	ON LED	Illuminates when receiving power
3	12V DC	+12V DC connector for powering the unit
4	4P I/O 4-pin FireWire Connector	Connects to the laptop ¹

¹ Or to any FireWire device having a 4-pin FireWire connector

5 Connecting a PS-1FW DV Interface / PSU

To connect the **PS-1FW**, as illustrated in the example in Figure 2, do the following:

1. Connect the FireWire port of a laptop, to the 4P I/O 4-pin FireWire connector on the **PS-1FW** via the 4-pin-to-4-pin cable supplied with the unit.
2. Connect the 12V DC power adapter to the power socket on the **PS-1FW** and connect the adapter to the mains electricity.
3. Connect the 6P I/O 6-pin FireWire connector to the 6-pin FireWire port of a FireWire device (for example, a video camera¹).

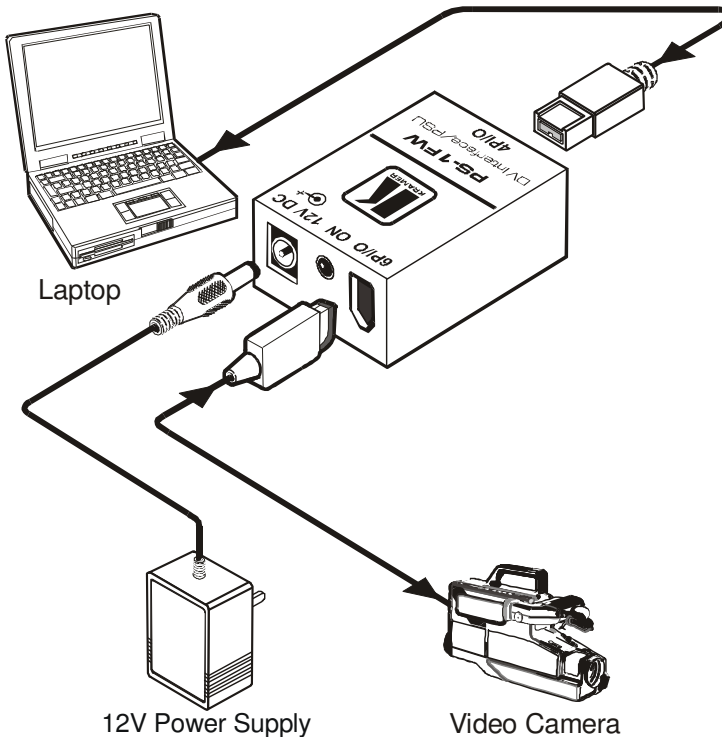


Figure 2: Connecting the PS-1FW DV Interface / PSU

¹ Or alternatively, an external hard disk

6 Technical Specifications

Table 2 includes the technical specifications:

Table 2: Technical Specifications¹ of the PS-IFW

INPUTS/OUTPUTS:	1 port on a 6 pin IEEE-1394A, 1 port on a 4 pin IEEE-1394A connector
STANDARDS:	Compliant with IEEE 1394 – 1995 and 1394A-2000 standards
BUS TRANSFER RATE:	Up to 400Mb/s signaling rates for high performance serial bus
SOURCED POWER:	12V 1.5A total for 6-pin port
COMPATIBILITY:	PC and MAC
POWER SOURCE:	12V DC
DIMENSIONS ² :	3.82cm x 2.12cm x 5cm (1.5" x 0.83" x 1.97") W, D, H
WEIGHT:	0.15kg. (0.55lbs.) approx.
ACCESSORIES:	One 4-pin to 4-pin short cable, power adapter

¹ Specifications are subject to change without notice

² Some versions may be smaller in size

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard.
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part 1: Residential, commercial and light industry environment".
- CFR-47:
FCC Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B – Unintentional radiators"

CAUTION!

- ☒ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ☒ Use the supplied DC power supply to feed power to the machine.
- ☒ Please use recommended interconnection cables to connect the machine to other components.



For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



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